

This plan has been developed by the Gloucester Department of Health Senior Services to identify the most salient environmental issues within Gloucester County and to propose a plan to address these issues for CY 2004. The Gloucester Department of Health Senior Services is a regional health department established in 1968 by the Board of Chosen Freeholders. All 24 municipalities contract with the department for health services. In 1986, the department became the certified local agency for the provision of environmental health services within Gloucester County under the auspices of the County Environmental Health Act (CEHA).

The Community

Gloucester County is located in southwestern New Jersey and covers about 328 square miles. Its northwestern boundary is positioned along the Delaware River, with Camden County to the northeast and Salem County to the southwest. Gloucester County's strategic location offers excellent access to the major in the northeastern United States. The Philadelphia, Pennsylvania and the Wilmington, Delaware commercial centers are approximately 30 miles apart. Traveling by vehicular transport, Atlantic City can be reached in an hour, New York City is about two hours away and Washington, D.C. can be reached in less than three hours. The county is highly diverse, with land use patterns that include, older, well-established urban areas; growing suburban areas; heavy industrial complexes; very productive agriculture; extensive woodlands; wetlands and marshes; regional retail facilities; Rowan University, Gloucester County Community College and exceptional public schools; several light industrial parks and traditional small villages. Even though Gloucester County is located within the highly urbanized Philadelphia Metropolitan Region, many parts of the county remain undeveloped. Approximately one-quarter of the county's total land area can be considered developed, including 30,000 acres in residential use, 6,000 acres in industrial use and 3,500 acres in commercial use as of 1990.

Most of the population is settled in the northern and eastern parts of the county in the large suburban townships of Deptford, Monroe, Washington and West Deptford, as well as the more established communities of Glassboro, Pitman and the City of Woodbury. More recently, Harrison and Mantua Townships have experienced rapid growth, while Elk and Woolwich Townships are expected to experience rapid growth. This development pattern has radiated out from the northwestern part of the county following along the county's major transportation corridors. Modern industrial parks with value-added distribution centers and light manufacturing facilities are concentrated along I-295 in the western part of the county, including Pureland, one of the nation's largest industrial parks (3,000 acres), located in Logan Township. In addition, two large oil refineries and several chemical plants are located along the I-295 corridor. The county's largest retail area is located along NJ Route 42 in Deptford Township, where the Deptford Mall provides the nucleus for several additional shopping centers. Smaller strip mall centers and outlets also lie along the NJ Route 42 corridor as it extends southward from Deptford through Washington and Monroe Townships. Recent development has tended to expand outward along and fill in between these corridors with the construction of the NJ Route 55 Freeway.

The county is served by such major highways as the New Jersey Turnpike, New Jersey Interstate 295, which cross the county near the Delaware River, and NJ Route 55, which extends through the center of the county from Deptford Township to Cumberland County. The Commodore Barry

Bridge links these roads to Pennsylvania's "Blue Route" and Pennsylvania Interstate 95 providing ready access to Philadelphia.

According to U.S. Census Bureau estimates, Gloucester County's population expanded much faster than the state's from 1990 to 1998, rising by 17,815 or 7.7% over the eight year period, from a base of 230,082 to a total of 247,897. In comparison, New Jersey's population grew by 4.6% during the same period. Since the last census, Gloucester County's rate of population growth has been the fastest within the southern New Jersey region. Much of the county's growth can be attributed to comparatively inexpensive land costs within the region, the availability of infrastructure such as schools, roads and utilities, and the excellent cultural amenities afforded by the county's Parks and Recreation system. All in all, the county offers an easily accessible location to the region's employment centers and an overall desirable "quality of life".

Gloucester County's economy is expected to continue its phenomenal growth. The greatest gains will most likely continue within the wholesale/retail trades and in the services industry sector. The largest gains from retail trade will come from supermarkets and food stores, general merchandise stores, and eating/drinking establishments. Supermarket and food store gains are likely to continue as chains expand existing stores and open new locations to meet the needs of the county's growing suburban communities. General merchandise stores appear to be expanding after previous years of nearly flat employment. The popularity of casual sit down restaurants is expected to continue and more of these facilities are likely to open. Wholesale trade is expected to increase at an even greater rate, with new warehouses and additions to existing facilities continuing to be built along NJ Interstate 295.

Local Environmental Issues

Given its diverse land use, past and present industrial uses, and situation as a major traffic corridor, Gloucester County has its share of environmental issues. These issues will be addressed through each major program area.

Hazardous Materials

The state has made a concerted effort to force each County to develop or contract with a governmental hazardous material response team. Gloucester County had relied on a 2-person response unit from the Health Department for hazardous materials response since 1986. The personnel were funded through the CEHA grant and responded to incidents within the county. The Office of Emergency Management (OEM) hazmat annex utilized hazmat teams developed by industry for backup. The state determined that in the wake of September 11, 2001 that governmental capability to respond to hazardous materials incidents had to be expanded. Formal agreements with hazmat teams had to be in place. The effort to invigorate hazardous materials response resulted in grants to hazmat teams for equipment. Gloucester County has recognized the need for a more coordinated emergency response for hazardous materials.

Gloucester County has formed a hazardous materials team through the OEM. The 2 hazardous materials responders that were in the Health Department have been transferred to OEM. They have become part of the OEM hazmat team. Gloucester County Department of Health and Senior Services has entered into an interagency agreement with OEM. OEM will provide hazmat services to our department. Vehicle and equipment from the \$200,000 supplemental CEHA funding is being purchased.

Water Pollution

Ground and surface water pollution are the largest program area. Well and septic system installations have mushroomed in the developing areas of the county. Surface waters are used for swimming at 15 lakes within the county. Ground water is the major source of drinking water in the county. Most municipal supplies rely on the PRM and Kirkwood Cohansey formations for water. Most of the developed municipalities have contracted with New Jersey American Water Co. to comply with withdrawal restrictions in the PRM aquifer. Restrictions for public water have resulted in many new developments utilizing private water wells.

One public bathing lake was closed for the majority of the bathing season due to high fecal coliform counts. The unusually wet weather during the summer may have caused the problem. It appears that non-point pollution sources are responsible for the high counts.

Our department continued to provide sample collection for surface water monitoring for NJDEP. In addition, we will collect water samples for the Alcyon Lake watershed study and the Maurice River watershed study. The Alcyon Lake watershed study is funded through the Gloucester County Planning Department. The Maurice River watershed study is funded through the Camden County Soil Conservation District.

Ground water sampling of private wells for mercury and volatile organic compounds (VOC) continued. Results of contamination were reported through the Private Well Testing Act (PWTA) and the approval of new and replacement wells. Fourteen different areas within the county were surveyed for the presence of mercury and VOC. 2 additional contaminated well areas were identified in Monroe Township as a result of our sampling program. Many exceedances for gross alpha activity were found from the PWTA results. Our department has sent out informational materials to those surrounding residences. Efforts are being made to incorporate as much data into the historical database from the 2001 grant.

Development in the more rural areas has continued to be the trend. Septic systems are the primary source of sewage disposal in these areas. One of the 3 major sewer plants is expanding in the county. The result of decreased funding for the expansion of sanitary sewers and the issues associated with increasing recharge of the aquifers has resulted in large developments on septic systems. There is a 22 percent increase in the number of septic system submittals from 2002 to 2003. The approval and installation of septic systems continues to be a major effort in the department.

Air Pollution

Air pollution in Gloucester County, not unlike other metropolitan areas is at times the County's most visible environmental issue. It originates from a mix of mobile, area and point sources with a significant contribution from sources outside the County. There have been exceedances of current National Ambient Air Quality Standards (NAAQS). Recently, it has been recognized that ozone and particulate matter may pose health risks at levels below those currently set as the NAAQS. New standards have been formulated and adopted but are presently not in place due to a legal challenge. It is unlikely that Gloucester County as well as other areas of New Jersey would be in compliance with these standards. In the year 2003 to date, Gloucester County had 2 exceedances of the NAAQS 1-hour standard for ozone. The proposed 8-hour ozone standard was exceeded on 6 days in Gloucester County. Exceedances at other sites ranged from 2 to 10 for the year to date.

Air toxics are a concern in Gloucester County. The 1996 Air Toxics Inventory estimated that 625 tons per year of air toxics were emitted in Gloucester County. The mix of the different components of air pollution were:

- 44 percent from mobile sources
- 20 percent from nonroad mobile sources
- 28 percent from major sources
- 8 percent from area and other sources

It should be noted that this analysis is based on modeled data. In a previous pilot project with NJDEP, Gloucester Department of Health and Senior Services identified some risk estimates that may have been based on incorrect assumptions with regard to air toxic emissions resulting in modeled air toxic concentrations that are unrealistically high. A major chemical waste processing facility has closed since the 1996 Inventory.

As a major transportation thoroughfare, Gloucester County is notably impacted by mobile sources of pollution. Clearly the evaluation and control of air pollution is one of the most salient environmental issues within Gloucester County.

The locations of major employment centers for Gloucester County residents were plotted. Research found in 1998 that 81 percent of County residents worked in New Jersey. This was broken down as 46 percent, or 51,372 individuals, who worked within Gloucester County and over 38,000 people, or 35 percent of County residents, worked in other New Jersey counties. These numbers indicate that new jobs are likely to be found outside the County. Other New Jersey counties in which the highest numbers of Gloucester County residents worked included:

- Camden 21,708 19.6%
- Burlington 5,179 4.7%
- Cumberland 3,338 3.0%
- Atlantic 3,182 2.9%
- Salem 2,694 2.4%

Another 12 percent of Gloucester County workers (13,501) were employed in the City of Philadelphia, and 5 percent worked in other Pennsylvania locations. Therefore, 36.3 percent of Gloucester County residents commute on the Route 42 and Route 295 corridor. Some percentage would utilize Route 322.

Traffic is also increased during the summer months with access to the shore through Route 322, Route 42, and Route 295. Air pollution from mobile sources is the major factor in air pollution in Gloucester County.

Gloucester County continues to identify and inspect minor source facilities. However, the large mobile source of air pollution in the county can not be addressed through the CEHA program. Additional mass transit facilities such as light rail may aid in reducing air pollution levels.

Solid Waste

The department lost the person conducting solid waste inspections. A new person has been assigned this task. We anticipate completing the inspections for 2003

Other issues

There are many other issues too numerous to elucidate upon at length in this context that warrant no less a degree of priority. These include surface water quality, solid waste handling and disposal, and the intentional introduction of hazardous substances to the environment in the form of pesticide use. An emerging issue is the role of Local Public Health / CEHA agencies with regard to Emergency Preparedness. Certainly, with their knowledge of industrial facilities, chemical agents, and public health matters overall, the CEHA agencies are in a unique position to provide vital support to those agencies charged with domestic preparedness. Open and effective government is essential to adequately address any of these matters.

Emerging Issues

Emergency Preparedness

The Gloucester Department of Health Senior Services maintains an intimate working knowledge of the majority of facilities utilizing and transporting hazardous substances in Gloucester County. Some of these materials can be classified as "extremely hazardous" and if released in substantial quantity could pose a grave threat to the citizens of Gloucester and adjoining counties. Such facilities, in the current circumstance, could reasonably be viewed as potential targets of terrorist activities. If appropriate resources are allocated, the Department could readily work cooperatively with LEPC's and Public Safety personnel in the identification of these facilities; evaluation of the magnitude of the threat to the population; and the identification of measures that may be implemented to mitigate these threats.

Additionally, the Department historically served as the primary hazardous materials response

entity within the County. With the evolution of the EOM HazMat team, the Department maintains an interagency agreement for emergency response. Efforts of greater cooperation and standard operating procedures are being developed between the Health Department and EOM for hazmat, bioterrorism, and weapons of mass destruction.

Drinking Water Contamination in Existing Wells

Sampling of existing wells will continue as a priority activity. Additional exceedances for both compounds will be generated from the new and replacement well program and the PWTA. The implementation of the testing of rental properties under the PWTA is to take effect in 2004. The sampling will produce additional problem areas.

UST program

Gloucester County will virtually complete initial UST inspections from the active facilities list in 2003. An updated list from UST would be helpful in determining facilities that have had their status changed to inactive. Efforts will be made to conduct additional follow-up on those facilities that have not complied between 2000 and 2002.

Solid Waste

There was discussion at the 2004 CEHA grant conference about increasing activities in recycling. Gloucester County has a recycling program through the Gloucester County Improvement Authority (GCIA). The program is conducted through the franchise at the incinerator. Multiple unit apartments and other commercial properties are inspected. They are given warnings to comply with recycling regulations. The GCIA does not have an interlocal agreement with our Department.

There has been concern about entering into an interlocal agreement with GCIA since they operate the major solid waste facility within the county. However, we will consider entering into an agreement for recycling enforcement.

Resources

Resources from the base CEHA grant have been stagnant. Personnel are maximized in conducting CEHA activities. The DEP staff at the Office of Local Environmental Management has done an excellent job to date of adding projects to increase the funding levels to the counties. While certain program areas certainly warrant expanded activities, in general, a significant expansion cannot be conducted without the funding to provide for staff and equipment to conduct the activity.